

CLAIMS

1. A single reel data storage cartridge, comprising:
 - a housing having an access window;
 - a single reel rotatably disposed within the housing and having a storage tape wound on the reel; and
 - a guide surface disposed within the housing, wherein
 - the storage tape extends from the reel to the guide surface before extending to the access window, and
 - the storage tape is adapted to be releasably attached to a take-up reel of a tape drive such that the storage tape may be removed from the housing through the access window, guided within the tape drive adjacent a data transducer, and wound on the take-up reel.
2. The device of claim 1, wherein the guide surface includes a rotatable surface.
3. The device of claim 1, wherein the guide surface includes a stationary surface.
4. The device of claim 1, wherein the guide surface includes a contoured surface.
5. The device of claim 1, wherein the housing includes only a single opening wherein the tape is accessible.
6. The device of claim 1, wherein the data transducer includes at least one of a read head and a write head.

7. The device of claim 1, wherein the guide surface is positioned within the housing to guide the tape away from the reel and then back to reengage the reel before extending to the access window.
8. The device of claim 7, wherein when the reel is driven the storage tape becomes separated from the reel when reengaging the reel by a thin layer of air.
9. The device of claim 1, wherein the guide surface is positioned to increase a tape path within the housing.
10. The device of claim 1, further including a second guide surface disposed within the housing, wherein the storage tape extends to a second guide surface before extending to the access window.
11. The device of claim 1, wherein the storage tape includes a leader block adapted to be releasably attached to a take-up reel.
12. A tape drive with a storage cartridge disposed therein, comprising:
 - a storage cartridge housing having:
 - an access window,
 - a single supply reel rotatably disposed within the storage cartridge housing and having storage tape wound on the supply reel, and
 - a guide surface disposed within the storage cartridge housing; and
 - a tape drive having:
 - at least a first guiding element,
 - a data transducer, and
 - a take-up reel, wherein

the storage tape extends from the supply reel to the guide surface before extending through the access window to the first guiding element, and the storage tape is guided within the tape drive adjacent a data transducer, and wound on the take-up reel.

13. The device of claim 12, wherein the guide surface includes a rotatable surface.
14. The device of claim 12, wherein the guide surface includes a stationary surface.
15. The device of claim 12, wherein the guide surface includes a contoured surface.
16. The device of claim 12, wherein the storage cartridge housing includes only a single opening wherein the storage tape is accessible.
17. The device of claim 12, wherein the data transducer includes at least one of a read head and a write head.
18. The device of claim 12, wherein the guide surface is positioned within the storage cartridge housing to guide the storage tape away from the supply reel and then back to reengage the supply reel before extending to the access window.
19. The device of claim 12, wherein the storage tape includes a leader block adapted to be releasably attached to the take-up reel.
20. A tape path between a storage cartridge supply reel and a tape drive take-up reel, comprising:
 - a tape path extending from a reel housed within a storage cartridge housing to a take-up reel of a tape drive, wherein

the tape path is guided within the tape drive adjacent a data transducer before engaging the take-up reel of the tape drive;

the tape path is guided by a guide surface within the storage cartridge housing prior to engaging a first guiding element of the tape drive; and

a distance of the tape path between the supply reel within the storage cartridge housing and the first guiding element of the tape drive is increased by the guide surface.

21. The tape path of claim 20, wherein the first guiding element includes a guide roller in the tape drive.
22. The tape path of claim 20, wherein the first guiding element includes a stationary guide in the tape drive.
23. The tape path of claim 20, wherein the guide surface includes a rotatable surface.
24. The tape path of claim 20, wherein the guide surface includes a stationary surface.
25. The tape path of claim 20, wherein the guide surface includes a contoured surface.
26. The tape path of claim 20, wherein the guide surface is positioned within the housing to guide the storage tape away from the reel and then back to reengage the reel before extending to the access window.
27. The tape path of claim 26, wherein when the reel is driven the storage tape becomes separated from the reel by a thin layer of air.

28. The tape path of claim 20, further including a second guide surface disposed within the housing, wherein the storage tape extends to a second guide surface before extending to the access window.
29. A method for driving a data storage tape cartridge, comprising:
receiving a data storage cartridge within a tape drive, wherein the storage cartridge includes a housing with a supply reel rotatably disposed therein and a guide surface; and
linearly streaming a storage tape along a tape path from the supply reel of the storage cartridge, adjacent a data transducer located in the tape drive, and to a take-up reel of the tape drive, wherein
the tape drive includes a first guiding structure along the tape path from the cartridge, and
the guide surface in the cartridge housing increases the tape path between the supply reel and the first guiding structure.
30. The method of claim 29, wherein the guide surface includes a rotatable surface.
31. The method of claim 29, wherein the guide surface includes a stationary surface.
32. The method of claim 29, wherein the guide surface includes a contoured surface.
33. The method of claim 29, wherein the guide surface is positioned within the housing to guide the storage tape away from the reel and then back to reengage the reel before extending to the access window.

34. The method of claim 33, wherein when streaming the storage tape, the storage tape becomes separated from the reel by a thin layer of air.
35. The method of claim 29, further including a second guide surface disposed within the housing, wherein the storage tape extends to a second guide surface before extending to the access window.